Metabolic Karma and Health
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KARMA

The Sanskrit word “karma” represents the past, present, and future. A noun that is used to describe actions undertaken in the past, experiences being felt now, as well as destiny that will manifest in the future, karma can be used in multiple ways. “Karma” also refers to predetermination, and can be used to explain the inevitable or non-modifiable aspects of life. Indian philosophy is sometimes criticized for promoting fatalism. Nothing, however, can be further from the truth. The karmic hypothesis actually suggests that one can use actions to modify the future course of events. This is true not only for actions, but also for beliefs, thoughts, and intentions: the right action, undertaken with the right intention, in the right direction, is bound to lead to the right outcomes, and accomplish desired results.

HEALTH KARMA

The concept of karma is engrained in health and disease. The etiology and pathogenesis of illness are the karma of the past; present health status, the karma of the present; and prognosis karma of the future. Most diseases are caused by or precipitated by inappropriate health-related behavior. The Global Burden of Disease study suggests that most risk factors of disease can easily be avoided. The same findings emerge from the INTERHEART study, which analyzed the causes of myocardial infarction. Excessive tobacco and alcohol intake, suboptimal exercise, and inadequate fruits/vegetable consumption are examples of karma that lead to coronary artery disease. Other karmas which can precipitate myocardial infarction include uncontrolled lipids, blood pressure, body weight, and hyperglycemia. These four challenges remind one of the quadriga or chariot run by four horses. Allegorically, the chariot represents the human body, and the horses, the senses.

METABOLIC KARMA

This analogy serves as a useful explanation of the work done in the metabolic clinic to manage wayward horses and ensure optimal health. Metabolic karma can be defined as the actions taken, in the past and present, to influence metabolic health, in the present and future. The term “metabolic karma” was first popularized by Thomas et al., and we reiterate our acknowledgment and appreciation for his use of age-old Sanskrit terminology to explain a concept that is backed by modern evidence.

Metabolic karma encompasses various domains, including lifestyle and behavior, as well as the utilization of pharmacotherapy and other interventions. This is similar to the terms metabolic memory and glycemic legacy, which have been used to describe the positive effect of metabolic control on long-term health in persons living with diabetes.

EVIDENCE FOR KARMA

Metabolic karma is an evidence-based concept. Recently the United Kingdom Prospective Diabetes Study (UKPDS) reported a 44-year-long follow-up of their participants. The UKPDS aimed to assess the impact of various glucose-lowering therapies on complications of diabetes. Participants were randomized to receive “conventional” or “intensive” therapy. Timely intensive glycemic control with insulin and sulfonylureas was able to reduce microvascular complications by 26% and mortality by 11%. Similar intervention with metformin accomplished a 25% reduction in mortality and a 31% fall in myocardial infarction, 44 years after intensive control had been instituted for the duration of the study.

This data build upon and strengthen earlier reports from UKPDS, the Steno trial, and others. These trials along with the more recent drug-specific cardiovascular outcome trials have revealed statistically significant improvements in long-term diabetes outcomes with various glucose-lowering strategies and interventions. All these results reinforce the fact that meaningful improvements can be brought about, in diabetes care, using the right strategy, at the right time. The advantages persist long after the “initial” intervention has been completed. This is the phenomenon of metabolic karma, that we work to achieve in our fellow citizens who live with diabetes.

CLINICAL RELEVANCE

The concept of metabolic karma holds great clinical as well as public health relevance. The evidence base of glycemic legacy can easily be explained to our patients as beneficial metabolic karma, or as equivalents in other languages (metabolic Vipaka). This phrase can be used to encourage proactive health behavior, with regard to both lifestyle and adherence to prescribed medication. It can also be used as a slogan for public awareness campaigns and health care policies, geared towards ensuring diabetes control. In fact, the utility of this slogan is not limited to diabetes: it holds true for all noncommunicable and metabolic diseases. Please join us in our endeavor to improve the metabolic karma, and the health of our countrymen and women.

REFERENCES

7. UK Prospective Diabetes Study. [last accessed on 2022 Oct 5]. Available from: https://www.dtu.ox.ac.uk/ukpds/

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